



Quantitative Aptitude I

3/4 B. Tech, Semester 1

Course Objectives:

- To categorize, apply and use thought process to distinguish between concepts of Quantitative methods.
- To prepare and explain the fundamentals related to various possibilities and probabilities related to quantitative aptitude.
- To critically evaluate numerous possibilities related to puzzles.

Course Outcomes:

The student will be able to

- Use their logical thinking and analytical abilities to solve Quantitative aptitude questions from company specific and other competitive tests.
- Solve questions related to Time and distance and time and work etc. from company specific and other competitive tests.
- Understand and solve puzzle related questions from specific and other competitive tests

UNIT I

6 Periods

Numerical computation:

Applications based on Numbers, Chain Rule, Ratio Proportion

UNIT II

6 Periods

Numerical estimation - I

Applications Based on Time and work, Time and Distance

UNIT III

4 Periods

Numerical estimation – II

Applications based on Percentages, Profit Loss and Discount, Simple interest and Compound Interest Partnerships, Shares and dividends

UNIT IV

4 Periods

Data interpretation

Data interpretation related to Averages, Mixtures and allegations, Bar charts, Pie charts, Venn diagrams

UNIT V

4 Periods

Application to industry in Geometry and Mensuration

Books for practice

1. Quantitative aptitude by R S Agarwal, S Chand Publications
2. Verbal and non verbal Reasoning by RS Agarwal from S Chand publications

References

1. Barron's by Sharon Welner Green and Ira K Wolf (Galgotia Publications pvt. Ltd.)
2. Quantitative Aptitude by U Mohan Rao Scitech publications
3. Quantitative Aptitude by Arun Sharma McGrawhill publications
4. Quantitative Aptitude by Ananta Asisha Arihant publications
5. Quantitative Aptitude by Abhijit Guha
6. Quantitative Aptitude by Pearson publications
7. Material from „IMS, Career Launcher and Time Institutes for Competitive exams.
8. Elementary and Higher Algebra by H. S. Hall and S. R. Knight

Verbal Ability I
3/4 B. Tech, Semester 1

Course Objectives

1. To categorize and explain various principles of grammar in order to help students to minimize errors in English
2. To critically evaluate a given reading material for improving ones' reading skills and comprehension
3. To illustrate and explain the intricacies and nuances involved in choosing responses to the questions asked in an examination, reading between the lines and beyond the lines
4. To describe and use different idiomatic expressions, phrasal verbs and rules of punctuation, in professional contexts

Course Outcomes

1. Detect errors of grammar and usage in a given sentence/text and rectify them by making appropriate changes
2. Solve questions based on critical reasoning
3. Analyze reading passages and quickly find out the correct responses to questions asked by using reading skills like skimming, scanning, reading between the lines, etc.
4. To use idiomatic expressions in writing and speaking and to solve questions based on them.

Unit 1

8 Periods

Grammar and Structure

Parts of Speech (with special emphasis on Prepositions, Conjunctions and Pronouns) – Articles – Tenses – Phrases and Clauses - Subject Verb Agreement – Conditional Clauses – Phrasal Verbs – Degrees of Comparison – Modifiers (Misplaced and Dangling Modifiers) – Determiners – Parallelism – Word Order – Subjunctive Mood – Redundancy – Error Detection and Sentence Correction

Unit - 2

6 Periods

Reading Comprehension

Structure of a Reading Passage – Idea Organization Styles – Style and Tone – Skimming and Scanning – Techniques for Fast and Active Reading – Different Types of Questions and Techniques for Answering Them – Reading between the Lines and Reading beyond the Lines – Theme Detection – Identifying Central Idea of the Passage – Using Context to Answer Vocabulary Based Questions

Unit -3

6 Periods

Critical Reasoning

Understanding Critical Reasoning – Basic Terminology in CR (Premise, Assumption, Inference and Conclusion) – Sequencing of Sentences (Rearranging Jumbled Paragraphs) – Cloze Passages

Unit - 4

4 Periods

Usage

Sentence completion techniques (with emphasis on signpost words), idiomatic language, structure and coherence in paragraph, punctuation, run-on errors, sentence fragments, comma splices



Quantitative Aptitude II

3/4 B. Tech, Semester II

Course Objectives:

- To categorize, apply and use thought process to distinguish between concepts of reasoning
- To prepare and explain the fundamentals related to various possibilities and probabilities related to quantitative aptitude.
- To critically evaluate numerous possibilities related to puzzles.

Course Outcomes:

The student will be able to

- Use their logical thinking and analytical abilities to solve reasoning questions from company specific and other competitive tests.
- Solve questions related to permutation & combinations and probabilities from company specific and other competitive tests.
- Understand and solve puzzle related questions from specific and other competitive tests.

UNIT I

8 Periods

Numerical Reasoning:

Problems related to Number series, Analogy of numbers, Classification of numbers, Letter series, Seating arrangements, Directions, blood relations and puzzle test.

UNIT II

4 Periods

Combinatorics:

Counting techniques, Permutations, Combinations and Probability

UNIT III

4 Periods

Syllogisms and data sufficiency

UNIT IV

4 Periods

Application of Base system:

Clocks (Base 24), Calendars (Base7), Cutting of Cubes and cuboids

UNIT V

4 Periods

Puzzle Solving & Time Management using various problems solving tools and techniques:

Selective puzzles from previous year placement papers

Selective puzzles from book Puzzles to puzzle you by Shakunatala devi

Selective puzzles from book more puzzles by Shakunatala devi

Selective puzzles from book puzzles by George Summers

Books for practice

1. Quantitative aptitude by R S Agarwal, S Chand Publications
2. Verbal and nonverbal Reasoning by R S Agarwal, S Chand publications
3. Puzzles to puzzle you by Shakunatala devi orient paperback publication
4. More puzzles by Shakunatala devi orient paperback publication
5. Puzzles by George summers orient paperback publication.

References:

1. Barron's by Sharon Welner Green and Ira K Wolf (Galgotia Publications Pvt. Ltd.)
2. Material from 'IMS, Career Launcher and Time' institutes for competitive exams.
3. Reasoning by B S Sijwali Arihant publications
4. Reasoning Arun Sharma McGraw Hill publications

Websites:

1. www.m4maths.com
2. www.Indiabix.com
3. 800score
4. Official GRE site
5. Official GMAT site

Verbal Ability II & Employability Skills
3/4 B.Tech , Semester II

Course Objectives

1. To prepare the students on various aspects of effective writing by selecting and organizing relevant information
2. To list and discuss selected high frequency words, their antonyms, synonyms, etc.
3. To demonstrate and recommend various techniques for effective speaking in different situations
4. To illustrate and explain about the different types of questions asked in competitive exams and the techniques to be used to solve them
5. To plan group activities in order to provide opportunities for students to demonstrate professionalism and corporate readiness

Course Outcomes

By the end of this course, the student will be able to:

1. Write paragraphs, essays, emails, stories and summaries of group discussions on given topics.
2. Converse with ease during interactive sessions in their classrooms, compete enthusiastically in group activities like debates, elocutions, JAM's, presentations.
3. To solve different types of questions based on vocabulary, structure, grammar and verbal reasoning
4. To demonstrate corporate readiness in terms of attitude, communication, team work and emotional balance

Unit 1

6 Periods

Writing Skills

Essay Writing – Paragraph Writing – Story Writing – Business Letter Writing – Email Writing – Resume Writing

Unit 2

8 Periods

Vocabulary

Synonyms and Synonym Variants (High Frequency Words) – Antonyms and Antonym Variants (High Frequency Words) – Homonyms – Hyponyms and General Idioms – Frequently Confused Words

Unit 3

8 Periods

Speaking Skills

JAM Sessions, Group Discussion Sessions, Debates, Extempore Speeches, Mock Interviews

Unit 4

4 Periods

Corporate Readiness

Demonstrating Positive Attitude – Communicating Effectively – Building Interpersonal Relationships – Working in Teams – Managing Emotions

Reading/ Listening material:

1. Newspapers like 'The Hindu', 'Times of India', 'Economic Times'.
2. Magazines like Frontline, Outlook and Business India.
3. News channels NDTV, National News, CNN

References:

1. Books written by Stephen Covey and Dale Carnegie Seven Habits of Highly Effective People etc-Simon&Schuster, Running Press book publishers

2. Books written by Bertrand Russell-Oxford University Press

Suggested General Reading

1. **Who Moved My Cheese?** By Spencer Johnson-GP Putnam's Sons
2. **The Heart of War**-Sun Tzu by Nabra, Barnes & Noble
3. **The Monk Who Sold His Ferrari**-Robin Sharma by HarperCollins, Jaico Publishers
4. **The Hobbit** and other books by J.R.R. Tolkien-HarperCollins

Suggested Authors

William Dalrymple	V.S. Naipaul	Kushwanth Singh	Ernest Hemingway
Charles Dickens	Leo Tolstoy	R.K. Narayan	Amitav Ghosh
Vikram Seth	Oscar Wilde	Sudha Murthy	Anshu Singh